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<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>		Docket Number (Optional) <b>MAT - 001</b>	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on <u>February 6, 2006</u> Signature <u>Stanley K. Hill</u> Typed or printed name <u>Stanley K. Hill</u>		Application Number <b>10/665,921</b>	Filed <b>09/18/2003</b>
		First Named Inventor <b>Ralph W. Cooper</b>	
		Art Unit <b>2856</b>	Examiner <b>Garber, Charles</b>
Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.  This request is being filed with a notice of appeal.  The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.			
I am the <input type="checkbox"/> applicant/inventor. <input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/95) <input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>37,548</u> <input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____			
		<u>Stanley K. Hill</u> Signature <u>Stanley K. Hill</u> Typed or printed name <u>(508) 303-2003</u> Telephone number <u>February 6, 2006</u> Date	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.			
<input type="checkbox"/> *Total of _____ forms are submitted.			

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT(S):	Cooper	CONFIRMATION NO.:	7057
SERIAL NUMBER:	10/665,921	ART UNIT:	2856
FILING DATE:	September 18, 2003	EXAMINER:	Garber, Charles D.
TITLE:	LEAK DETECTION SYSTEM		

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Sir:

This paper responds to the Final Office Action mailed from the United States Patent and Trademark Office on January 31, 2006 ("current Office Action"). A Notice of Appeal is being filed concurrently with this paper. Please note that a Notice of Appeal fee and an Appeal Brief fee has already been paid by Applicant and that the Examiner has stated in the Office Action of December 22, 2005 that it may be applied to a new appeal. Accordingly, it is Applicant's understanding that a new Notice of Appeal will not be charged in accordance with this Pre-Appeal Brief Request for Review. Nonetheless, if a new Notice of Appeal fee is required, it may be charged to Deposit Account No. 50-2295 as indicated above.

**Remarks**

Applicant has carefully reviewed and considered the current Office Action and the reference(s) cited therein. Claims 15-19 are pending in this application. The Examiner has rejected Claims 15-19 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,441,070 issued to Thompson ("Thompson"). Applicant respectfully traverses this rejection.

Applicant contends that the claims differentiate the Applicant's invention from Thompson. Claim 15, the only independent claim being reviewed, requires a single detector whereas Thompson requires a plurality of flow sensors (i.e., user demand detectors). It is precisely this difference that makes the present invention significantly less expensive to manufacture, install, and to maintain than the significantly more expensive system of Thompson. This was explained in the Response filed May 4, 2005 in the following manner:

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The multiple flow sensors required in Thompson create exactly the kind of complexity that the present invention seeks to avoid. The cost of producing and installing a fluid management system with a plurality of flow sensors can be prohibitively expensive. Moreover, the complexity of the system makes it significantly more expensive and difficult to maintain than the present invention. Each flow sensor in Thompson is connected by wire to a management device 100. See Figure 1. The average residential structure will have a significant number of wires running from the management device 100 to each of the flow sensors. Installing all the wires is an extremely time consuming and expensive endeavor, especially in an already existing home. Many commercial structures will be larger and have even more flow sensors, requiring even more wiring.

The present invention, on the other hand, utilizes a single user demand detector. The single user demand detector can be positioned in close proximity to the other elements of the present invention (pressure decay detector, shut-off valve, etc.), as shown in Figure 1, so that the present invention can be easily placed in a single housing structure. Thus, the entire leak detection system can be more easily installed and maintained than the system in Thompson.

It is possible that the Examiner does not fully understand this difference between the present claims and Thompson. For example, in the Office Action of May 17, 2005 the Examiner rejected Claim 15 (and others) under 35 U.S.C. §103(a) and stated the following:

Regarding Claims 1, 8, 15, Thompson discloses a fluid management system determining a leak if pressure decay based on pressure sensor signal and pressure timing means indicate lost pressure while there is no usage (see column 3 lines 13-40 and column 10 line 56 through column 11 line 45). The system may be used with a house or a building (column 1 line 46) but Thompson does not expressly disclose the house occupied by a single user.

Examiner takes Official Notice that it is widely known for houses to be occupied by a single user. It would have been obvious to one having ordinary skill in the art at the time the invention was made to equip a house with a water management system even if the house has only a single user because it is common for single people to occupy a house and a single user would be interested in managing water consumption for the same reason an entire family would be. Managing water may help the single occupant reduce consumption and a water management system would help the single user detect a leak before the water produced significant damage to the single user's residence.

Apparently at this point in the prosecution, the Examiner believed that the only difference between Claim 15 and Thompson was that Thompson did not expressly disclose the house occupied by a single user. The Examiner then takes Official Notice that it is widely known for houses to be occupied by a single user and rejects Claim 15 over the combination of Thompson and the Official Notice. This rejection was successfully refuted in subsequent Responses to the USPTO. Clearly, the present claims do not address multiple users versus a single user.

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The presently reviewed claims requires a system to comprise a single, user demand detector. Applicant has discovered that a single detector is capable of determining whether user demand is present in the pressurized piping system. Pressurized piping systems include water lines such as would be found delivering potable water to a residential home, a commercial building, or an institutional building. Thus, pressurized piping systems generally comprise a plurality, and frequently many, outlets such as appliances and faucets.

The Examiner has not stated a prima facie case of obviousness. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fitch, 23 USPQ 2d at 1783-84 (quoting In re Fine, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988)). Moreover, it is not generally enough that the prior art suggest the combination recited in the claims; there must also be some reasonable expectation of success for the suggested combination. Not only does Thompson not suggest the combination of elements in Claim 15, Thompson teaches away from the present invention. Thompson requires "a fluid flow sensor, located at or upstream of each fluid control valve." Column 4, lines 39-42. *See also* Claims 1, 10, and 18. Thus, Thompson requires a fluid flow sensor for each fluid control valve (e.g., a faucet). The present invention on the other hand is limited to a single flow switch or a single flow meter for the entire pressurized piping system. Thompson further teaches away from the present invention by teaching the following: "it is important that the flow sensors be located as close as possible to the water flow control valves of the water utilization devices. In fact, the flow sensors would ideally be located in the water utilization devices and could be possibly be part of the water utilization devices." To the contrary, the present invention, as claimed, and as shown in Figure 1, utilizes a single flow switch or a single flow meter, which can be placed in close proximity to the control logic, and therefore, a significant distance from any water utilization devices.

Even if the Examiner had stated a prima facie case of obviousness, the Applicant has successfully rebutted the rejection. The differences between the present invention and Thompson create significant benefits. First, the present invention can provide leak detection to *the same pressurized piping systems as Thompson at significantly less cost*. For example, the fluid management system of Figure 1 in Thompson requires 15 flow sensors (numbered 60-74). The present invention, on the other hand, can provide leak detection to the same piping system shown in Figure 1 of Thompson using a single flow switch or a single flow meter. Second, the

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present invention is significantly easier and more cost effective to both install and maintain. The fluid management system 200 of Thompson requires each flow sensor to be connected via wires to a water management device 100. Since the flow sensors in Thompson are "located as close as possible to the water flow control valves of the water utilization devices," the wires connecting the flow sensors to the water management device 100 must run a significant distance from the water management device 100 and most probably will be placed inside the walls of the residence. Placing the wires inside the walls is time consuming and expensive, especially if the system is installed after the residence has been built. Reaching the wires for needed repairs will also be time consuming and expensive. The present invention, on the other hand, can provide leak detection *to the same pressurized piping systems as Thompson* using the leak detection system 100 shown in Figure 1 of the present specification, which contains a single flow switch 116 placed in close proximity to the control box. The entire system 100 can be easily installed in close proximity to the residential water supply where it can also be easily reached when it needs to be reset or repaired.

In Response to Arguments in the current Office Action, the Examiner states "it is noted that the features upon which applicant relies (i.e., close proximity between the sensor and control box) are not recited in the rejected claim(s)." This statement has no basis in law. There is no requirement that the arguments or evidence presented by the application to rebut the prima facie case of obviousness be supported by or contained in the patent application as originally filed. See *In re Chu*, 66 F.3d 292, 36 USPQ 2d 1089 (Fed. Cir. 1995). The Federal Court has further stated the following in this connection:

We have found no cases supporting the position that a patent applicant's evidence and/or arguments traversing a 103 rejection must be contained within the specification. There is no logical support for such a proposition as well, given that obviousness is determined by the totality of the record including, in some instances most significantly, the evidence and arguments proffered during the give-and-take of ex parte patent prosecution.

Id. at 1095. If evidence and arguments rebutting an obviousness rejection do not have to be in the specification, then they certainly are not required to be in the claims.

At this point, it is unclear as to exactly what the Examiner believes is the difference between Thompson and the present invention as claimed. In the current Office Action, the Examiner states that "Thompson does not expressly disclose the device may consist essentially of only one flow meter or switch." However, in the same paragraph, the Examiner that Thompson would advantageously apply to the trivial case of only one detector at one water-using

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appliance. As discussed herein, Applicant contends that the Examiner has yet stated a specific valid reason why the teachings of Thompson make the present system requiring a single, user demand detector obvious. Applicant also contends that an amendment expressly requiring the pressurized piping system to include a plurality of outlets. However, Applicant would be interested in knowing whether the Panel believes that amending Claim 15 to require the piping system to have a plurality of outlets would put Claim 15 in condition for allowance.

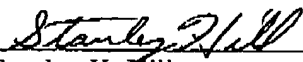
### Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. If the Examiner or Panel believes that a telephone conversation with the Applicant's representative would facilitate prosecution of this application in any way, they are cordially invited to telephone the undersigned at (508) 303-2003. If necessary, please apply any additional fees, or credit overpayments, to Deposit Account 50-2295.

Respectfully submitted,

Date: February 6, 2006  
Reg. No.: 37,548

Tel. No.: (508) 303-2003  
Fax No.: (508) 303-0005

  
\_\_\_\_\_  
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The undersigned hereby certifies that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service, with sufficient postage as first class mail, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

\_\_\_\_\_  
Stanley K. Hill

Date: February 6, 2006

  
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